REMARKS

This amendment is being filed in response to the Office Action having a mailing date of July 1, 2008. Various claims are amended as shown. No new matter has been added. With this amendment, claims 1-30 are pending in the application.

I. Discussion of the claims and cited references

The present Office Action rejected claims 1-5, 7-10, 15-24, and 28-30 under 35 U.S.C. § 103(a) as being unpatentable over Arai (U.S. Patent No. 7,224,672) in view of Palm (U.S. Patent Application Publication No. 2004/0184520).

For the reasons set forth below, these rejections are respectfully traversed. Therefore, it is kindly requested that the rejections be reconsidered and withdrawn.

A. Independent claim 1

Independent claim 1 as amended herein recites, *inter alia*, "obtaining an estimation of a length of a line by measuring transmission time between said modem and another modem through said line." Support for this amendment can be found, for example, on page 22, lines 10-15; page 13, lines 4-7; and elsewhere in the present application. It is respectfully submitted that none of the cited references estimate line length by measuring transmission time between modems.

For example, page 2 (section 2) of the present Office Action continues to cite Arai as teaching "obtaining an estimation of a length of a line." Page 3 (section 4) of the prior final Office Action of April 14, 2008 relies upon Arai's column 3, lines 50-55, and column 6, line 58 to column 7, line 6, which are reproduced below (emphasis ours):

> "Still another object of the present invention is to provide a key barometer for precisely estimating a line length of a subscriber line between a local switch and an xDSL modem of a customer, and deciding whether or not provision of a broadband communication service by use of an xDSL system is possible … In the second xDSL modem, the requiring unit 112

> sends out a requiring signal to the provider by the POTS, just as an analog signal used for a telephone communication is sent out, and obtains an evaluation barometer indicating the transmission characteristic of the subscriber line, based on the reception result of the analog signal transmitted by the local switch 101 in response to the requiring signal. Here, the line length of the subscriber line 102 connecting the local switch 101 and the xDSL modem 103 can be precisely estimated by making effective use of the fact that a characteristic of the analog signal transmitted from the local switch 101 onto the subscriber line is strictly prescribed by a spec of the local switch 101 and the fact that of a transmission line used generally as a subscriber line, a relation between the line length and an attenuation rate of the analog signal is known."

Thus from the above-quoted passages of Arai, it is abundantly clear that he estimates line length based on the "attenuation rate" of the analog signal (*i.e.*, based on the power level or the power loss of the analog signal). Arai provides further teachings in his column 3, lines 43-49 and 56-61; column 4, lines 36-40; column 12, lines 29-36, which are reproduced below (emphasis ours):

> "Another object of the present invention is to make it possible to precisely obtain a line length between a customer premises equipment and a local switch, with a control unit set up by a provider, by collecting a transmission loss concerning an analog signal as a part of transmission characteristics of a subscriber line connected to an xDSL modem … Still another object of the present invention is to make it possible to autonomously measure, by a function equipped in an xDSL modem, a transmission loss concerning an analog signal on a subscriber line connected to the xDSL modem. Thus, since the line length of the subscriber line can be estimated … In such an xDSL modem, the line

> length of the subscriber line between the local switch and the xDSL modem can be precisely estimated by evaluating the transmission loss of the analog signal transmitted by the local switch in the subscriber line ... In addition, since a correlation between an attenuation rate and a line length is known in a range including a frequency band of the modulated-analog signal as for a general subscriber line, the line length of the subscriber line from the xDSL modem equipment 220 to the local switch can be obtained based on this correlation and the attenuation rate obtained in accordance with the above-described procedures."

Thus further from the above-quoted passages from Arai, it is again abundantly clear that he estimates line length using an attenuation rate (power transmission loss) of the analog signal. It is therefore respectfully submitted that Arai does not meet the limitations of claim 1 that require "estimation of a length of a line by measuring transmission time between said modem and another modem through said line." Stated in another way, Arai's measurement of attenuation rate is not the same as measuring transmission time between modems as called for in claim 1.

Page 3 of the present Office Action cited Arai's column 2, lines 11-17 in rejecting previously presented claim 4, which had/has limitations directed towards the "timing advance measurement." However, as evident from Arai's column 2, lines 11-17 reproduced below, this passage of Arai is completely silent with respect to measurement of transmission time between modems:

> "On the contrary, when it is proved that a predetermined service quality cannot be acquired in the subscriber line connected to the subscriber's home, on the subscriber line a worker sent from the provider performs an operation for measuring characteristics of the subscriber line in order to investigate causes leading to deterioration of the service quality."

Hence, in view of the arguments presented above against the rejections, it is believed that claim 1 is allowable over Arai.

It is respectfully submitted that claim 1 is also allowable over Palm. Like Arai, Palm also estimates line length by examining the power level of a signal. Palm teaches the following in his paragraph [0246] (emphasis ours):

> "[0246] Before suggesting the power level of the PMM signals, the HSTU-X should make a rough estimate of the line length/attenuation by examining the received power levels of the ITU-T Recommendation G.994.1 carriers. In general, for reasons of spectral politeness, power levels should be selected so as to err on the side of using less power."

Thus from the above-quoted passage of Palm, it is abundantly clear that he also estimates line length by examining power levels, rather than by measuring transmission time between modems as required in claim 1.

Hence, claim 1 is also allowable over Palm.

B. Other independent claims

Independent claims 7, 16, and 21 as amended herein recite, *inter alia* and using varying language, "estimation of a length of a line by measuring transmission time between said modem and another modem through said line." As previously explained above, neither Arai nor Palm estimate line length by measuring transmission time between modems. Instead, Arai and Palm estimate line length by examining power levels (attenuation/transmission power loss) of a signal.

Hence, it is respectfully submitted that claims 7, 16, and 21 are also allowable.

C. Dependent claims 5 and 20

Dependent claims 5 and 20 respectively recite, *inter alia* and using varying language, "deactivating a cyclic prefix" and "deactivating a cyclic suffix." It is respectfully

submitted that these limitations are not met by the cited references, whether singly or in combination.

For example, page 3 of the present Office Action cited Arai's column 14, lines 28-42 as allegedly meeting these limitations. This allegation by the present Office Action is respectfully traversed.

Arai's column 14, lines 28-42 is reproduced below (emphasis ours):

> "As a transmission characteristic of the above-described line, for example, when data indicating a large transmission loss is obtained, as a countermeasure for offering the service, it is possible to decide without fail that a connection of the subscriber line must be changed from a subscriber line showing a much transmission loss to that showing a least transmission loss. Moreover, if a cyclic noise due to the near-end crosstalk from the ISDN equipment is a main cause to deteriorate the service quality, a proposal from the provider to the customer is conceived, which tells that a technology to avoid influences of the cyclic noise (see the recommendation Annex. C of G. lite and G. dmt that is an international standard spec as to the ADSL system by ITU-T) will be applied, and a service with a communication speed, for example, limited up to 500 kbps will be provided."

From the above-quoted passage of Arai, it is abundantly clear that he is addressing how to avoid "cyclic noise," rather than deactivating a "cyclic prefix" or a "cyclic suffix" as respectively recited in claims 5 and 20. In other words, the present Office Action has interpreted "cyclic noise" as being one and the same as "cyclic prefix" or "cyclic suffix." Such an interpretation is improper, since cyclic noise is not the same as a cyclic prefix/suffix.

Since the limitations of claims 5 and 20 have not been met, claims 5 and 20 are therefore allowable.

D. Other claim amendments

Various other amendments are made to the claims as shown to provide appropriate antecedent basis, to more precisely recite the subject matter contained therein, to make the terminology between and within related claims consistent, to make typographical/grammatical changes, and/or to otherwise place such claims in better form.

II. Allowable subject matter

The present Office Action indicated that claims 6, 11-14, and 25-27 would be allowable if rewritten in independent form. The Examiner is thanked for this indication of allowable subject matter.

Page 4 (section 4) of the present Office Action provided a Statement of Reasons for the Indication of Allowable Subject Matter. It is noted herein for the record that to the extent that there may be differences between the language used by the Statement to explain allowability, versus the actual language recited in each and every one of the allowable claims, it is the actual language recited in the allowable claims that determines the scopes thereof. Furthermore, while the Statement explained allowability only with respect to Arai, it is also noted herein for the record that the claims are allowable over the other references as well.

Accordingly, the scopes of the claims are not to be limited by the Statement.

III. Conclusion

Overall, none of the references singly or in any motivated combination disclose, teach, or suggest what is recited in the independent claims. Thus, given the above amendments and accompanying remarks, the independent claims are now in condition for allowance. The dependent claims that depend directly or indirectly on these independent claims are likewise allowable based on at least the same reasons and based on the recitations contained in each dependent claim.

If the attorney of record (Dennis M. de Guzman) has overlooked a teaching in any of the cited references that is relevant to the allowability of the claims, the Examiner is requested to specifically point out where such teaching may be found. Further, if there are any

informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact Mr. de Guzman at (206) 622-4900.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims remaining in the application are believed to be allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

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